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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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08/918,194    08/21/97    NATHASINGH    D    30-4358(4710

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MM42/0810

EXAMINER
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NGUYEN, T

ART UNIT	PAPER NUMBER
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2832

DATE MAILED: 08/10/99

**Please find below and/or attached an Office communication concerning this application r  
proceeding.**

**Commissioner of Patents and Trad marks**

# Office Action Summary

Application No.  
**08/918,194**

Applicant(s)  
**Nathasingh et al.**

Examiner  
**Tuyen T. Nguyen**

Group Art Unit  
**2832**



☒ Responsive to communication(s) filed on Jun 8, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-9 and 14-26 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-9 and 14-26 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 7, 8, and 14-25 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant fails to disclose written description of "an interlocking joint".

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 7, 8, and 14-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 lacks sufficient structure to support the functional language "forming an interlocking joint". Claims 7, 8, and 14-25 inherit the defect in the parent claim.

5. The term "substantially" in claim 8 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for

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ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

The term "collectively" in claim 8 is a relative term.

There is no antecedent basis for "the entire surface area" in line 2 of claim 8.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5, 7-9, 14, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Olsen [US 4,538,474].

Regarding claim 1, Olsen discloses a transformer core comprising a plurality of segments of amorphous metal strips *forming an interlocking joint*, each segment comprising at least one packet of said strips having edges. [see figure 4]

Regarding claim 2, Olsen discloses a core segment comprising a plurality of packets of cut amorphous metal strip having an overlap and underlap joint. [see figure 4]

Regarding claims 3-5, Olsen discloses each packet comprises a plurality groups of cut amorphous metal strips arranged in a step-lap joint [see figures 4-6] and having a C segment construction.

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Regarding claim 7, Olsen discloses the edges of each of said segments are coated with a bonding material that protects said edges and provides said segment with increased mechanical strength.

Regarding claim 8, Olsen discloses the segments form a core having a joint region and said coating applied to surface area of the core.

Regarding claim 9, Olsen discloses each of said packets has a plurality of joint ends support separately for assembly into a finished transformer core.

Regarding claim 14, Olsen discloses a transformer core comprising two C segments.

Regarding claim 19, Olsen discloses the core has a joint region and a binding material is applied to said joint region to maintain contact between segments therein.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen in view of

Lee et al. (US 5,134,771).

Olsen discloses the instant claimed invention except for the segment have been annealed and edge coating with bonding material. Lee et al teaches utilizing annealing and edge coating with bonding material to the segment for the purpose of strengthening the core segment. It would have

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been obvious to one having ordinary skill in the art at the time the invention was made to anneal and edge coat with bonding material to the core segment of Olsen, as taught by Lee et al., for the purpose of strengthening the core segment.

10. Claims 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen

Regarding claims 15-18, Olsen discloses the instant claimed invention except for number of C, I, and straight segments. It would have been an obvious matter of design choice to modify the transformer core of Olsen into form of shell-type or three leg core for three phase transformer by forming different C, I, and straight segments together.

11. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen in view of Granfield (US 2,465,798).

Olsen discloses the instant claimed invention except for the strips have varying widths arranged to provide a cruciform shape cross section. Grandfield teaches utilizing strips have varying widths arranged to provide a cruciform shape cross section. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the strips have varying widths arranged to provide a cruciform shape cross section, as taught by Grandfield, in Olsen's unit for the purpose of providing the advantage of assembling the round coil and maximizing the coil space fill factor.

12. Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen.

Olsen discloses the instant claimed invention except for the core is not housed in an oil filled or dry-type transformer, a distribution transformer, a power transformer, and used in a voltage

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conversion apparatus. It would have been an obvious matter of design choice to house the core of Olsen in an oil filled or dry-type transformer, a distribution transformer, a power transformer, and used in a voltage conversion apparatus, since applicant has not disclosed that housing the core in an oil filled or dry-type transformer, a distribution transformer, a power transformer, and used in a voltage conversion apparatus solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the core of Olsen being use as an electric induction apparatus.

13. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen in view of Ames et al. (US 4,450,206).

Olsen discloses the instant claimed invention except for the strips having a composition defined by the formula  $M_{70-80}Y_{5-20}Z_{0-20}$ . Ames et al. teaches utilizing the amorphous metal strip having a composition defined by the formula MYZ where the atom percent is in the range of the claimed invention (see TABLE I). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the amorphous metal strip of Ames into Olsen's unit so the core segments can be suitable for use in voltage conversion and energy storage applications

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Tuyen T. Nguyen whose telephone number is (703) 308-0821.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Michael Gellner, can be reached at (703)308-1721. The fax number for this Group is (703)305-1341.

Any inquiry of a general nature or relating to the status of this application of proceeding should be directed to the Group receptionist whose telephone number is (703)308-1782.

T-TN  
Tuyen T. Nguyen

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August 9, 1999

  
LINCOLN DONOVAN  
PRIMARY EXAMINER  
GROUP 2100